



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0006; Project Identifier AD-2021-01298-R]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Inc. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bell Textron Inc. Model 205A, 205A-1, 205B, 210, 212, 412, 412CF, and 412EP helicopters with a certain part-numbered tailboom left hand fin spar cap (spar cap) installed. This proposed AD was prompted by reports of cracked spar caps. This proposed AD would require inspecting each spar cap and depending on the inspection results, removing the spar cap from service. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bell Textron, Inc., P.O. Box 482, Fort Worth, TX 76101; telephone 1-450-437-2862 or 1-800-363-8023;

fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0006 or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Ameet Shrotriya, Aviation Safety Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177-1524; phone: (817) 222-5525; email: Ameet.Shrotriya@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0006; Project Identifier AD-2021-01298-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Ameet Shrotriya, Aviation Safety Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177-1524; phone: (817) 222-5525; email: Ameet.Shrotriya@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA is proposing to adopt a new AD for certain serial-numbered Bell Textron Inc. Model 205A, 205A-1, 205B, 210, 212, 412, 412CF, and 412EP helicopters with a spar cap part number (P/N) 212-030-447-117 installed. This proposed AD was prompted by multiple reports of fatigue cracking in the spar caps. Metallurgical lab reports identified that the cracks originate at the rivet holes, possibly from mechanical damage caused during deburring. This condition, if not addressed, could result in reduced structural integrity of the helicopter and subsequent loss of control of the helicopter.

FAA’s Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed the following Bell Alert Service Bulletins, each dated April 15, 2020 (ASB):

- ASB 205-20-116 for Model 205A and 205A-1 helicopters, serial numbers (S/N) 30001 through 30065, 30067 through 30165, 30167 through 30187, 30189 through 30296, and 30298 through 30332;
- ASB 205B-20-69 for Model 205B helicopters, S/N 30066, 30166, 30188, and 30297;
- ASB 210-20-13 for all serial-numbered Model 210 helicopters;
- ASB 212-20-162 for Model 212 helicopters, S/N 30502 through 30603, 30611 through 30999, 31101 through 31311, 32101 through 32142, and 35001 through 35103;
- ASB 412-20-180 for Model 412 and 412EP helicopters, S/N 33001 through 33213, 34001 through 34036, 36001 through 36999, 37002 through 37999, 38001 through 38999, and 39101 through 39999; and
- ASB 412CF-20-67 for Model 412CF helicopters, S/N 46400 through 46499.

Bell received a report of a fractured fin spar cap that occurred at vertical fin station (F.S.) 71 through the first rivet hole attaching the skin to the spar cap. Bell states that if undetected, the fin spar cap cracking may lead to additional structural damage. Each ASB specifies procedures for inspecting both flanges of the spar cap between F.S. 50 and F.S. 71 for cracks, loose rivets, and other damage using a 10x magnifying glass and flashlight and inspecting the exterior of the fin skin where it contacts the spar cap for cracks, loose rivets, and/or distortion. If no cracks or other damage are found, each ASB specifies returning the helicopter to service; if a crack or other damage is found, each ASB specifies contacting Bell's Product Support Engineering before further flight. Additionally, each ASB specifies that these inspections are to be accomplished within the next 100 flight hours or 90 days after the ASB's release, whichever occurs first, and every 100 flight hours thereafter.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require, within 100 hours time-in-service (TIS) after the effective date of the AD, and thereafter at intervals not to exceed 100 hours TIS, using a

10x or higher power magnifying glass and flashlight, inspecting both flanges of the spar cap for any crack, loose rivet, and other damage (such as a scratch, dent, spalling, or corrosion). This proposed AD would also require inspecting the exterior of the fin skin in the area where it contacts the spar cap for any crack, loose rivet, and distortion. If there is any crack, loose rivet, or other damage in either flange, or if there is any crack, loose rivet, or distortion in the fin skin area, removing the spar cap from service would be required before further flight.

Differences Between this Proposed AD and the Service Information

The ASBs specify contacting Bell if there is a crack or other damage, whereas this proposed AD would not. The ASBs also specify the compliance time for the initial inspection is within 100 flight hours or 90 days after April 15, 2020, whichever occurs first; whereas the initial inspection in this proposed AD would be required within 100 hours TIS after the effective date of this AD.

Interim Action

The FAA considers that this proposed AD would be an interim action. The design approval holder may develop a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, the FAA might consider additional rulemaking.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 226 helicopters of U.S. registry. The FAA estimates the following costs to comply with this proposed AD, using an average labor rate of \$85 per work-hour.

Each inspection would take about 1 work-hour, and there would be no parts costs, for an estimated cost of \$85 per inspection and \$19,210 for the U.S. fleet per inspection cycle. Replacing a spar cap, if required, would take about 50 work-hours and parts costs would be about \$2,000, for an estimated cost of \$6,250 per spar cap replacement.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following Bell Textron Inc. helicopters certificated in any category, with a tailboom left hand fin spar cap (spar cap) part number 212-030-447-117 installed.

(1) Model 205A and 205A-1 helicopters, serial number (S/N) 30001 through 30065 inclusive, 30067 through 30165 inclusive, 30167 through 30187 inclusive, 30189 through 30296 inclusive, and 30298 through 30332 inclusive;

(2) Model 205B helicopters, S/N 30066, 30166, 30188, and 30297;

(3) Model 210 helicopters, all S/Ns;

(4) Model 212 helicopters, S/N 30502 through 30603 inclusive, 30611 through 30999 inclusive, 31101 through 31311 inclusive, 32101 through 32142 inclusive, and 35001 through 35103 inclusive;

(5) Model 412 and 412EP helicopters, S/N 33001 through 33213 inclusive, 34001 through 34036 inclusive, 36001 through 36999 inclusive, 37002 through 37999 inclusive, 38001 through 38999 inclusive, and 39101 through 39999 inclusive; and

(6) Model 412CF helicopters, S/N 46400 through 46499 inclusive.

(d) Subject

Joint Aircraft System Component (JASC) Code 5302, Rotorcraft Tail Boom.

(e) Unsafe Condition

This AD was prompted by the discovery of fatigue cracking in the spar cap. A crack in the spar cap, if not detected and corrected, could create stress concentrations at the edge of the rivet holes, resulting in reduced structural integrity of the helicopter and

subsequent loss of control of the helicopter. The FAA is issuing this AD to detect and prevent this unsafe condition.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within 100 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 100 hours TIS:

(1) Using a 10x or higher power magnifying glass and a flashlight, inspect both flanges of the spar cap between fin station (F.S.) 50 and F.S. 71 for any crack, loose rivet, and other damage such as a scratch, dent, spalling, or corrosion, as depicted in Figure 1 of Bell Alert Service Bulletin (ASB) 205-20-116, ASB 205B-20-69, ASB 210-20-13, ASB 212-20-162, ASB 412-20-180, or ASB 412CF-20-67, each dated April 15, 2020, as applicable to your helicopter. If either spar cap flange is cracked, has a loose rivet, or has other damage, remove the spar cap from service before further flight.

(2) Inspect the exterior of the fin skin in the area that contacts the spar cap for any crack, loose rivets, and distortion. If there is any crack, loose rivet, or distortion in the fin skin in the area that contacts the spar cap, remove the spar cap from service before further flight.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Ameet Shrotriya, Aviation Safety Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101

Hillwood Pkwy, Fort Worth, TX 76177-1524; phone: (817) 222-5525; email: Ameet.Shrotriya@faa.gov.

(2) For service information identified in this AD, contact Bell Textron, Inc., P.O. Box 482, Fort Worth, TX 76101; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Issued on January 11, 2022.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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